

WHAT IS CLAIMED IS:

1. A system to rate refinery feed stocks for the formation of deposits on solid refinery surfaces comprising:

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(a) a solid nub having a deposit surface,

10 (b) means for controlling the magnitude and duration of the temperature of said surface, such that the temperature emulates the temperature variation of the solid refinery surface,

15 (c) means for introducing fuel and/or fuel containing additives onto said surface, and

20 2. The system of claim 1 further comprising a means for weighing said nub.

25 3. The system of claim 1 further comprising an enclosure and a means for introducing gas into said enclosure.

4. The system of claim 1 wherein said nub is steel, aluminum, brass or any solid material, or combination thereof.

5. The system of claim 1 wherein said means to control temperature includes a coiled cable heater, thermocouple and a temperature programmer.

6. The system of claim 1 wherein said means for introducing fuel and/or fuel additives, including a syringe pump and a hypodermic needle.

7. The system of claim 3 wherein said enclosure is a glass bell shaped shield.

8. The system of claim 3 wherein said gas is air.

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9. The system of claim 3 wherein said gas is inert.

10. A method to rate fuels and fuel additives for the formation of deposits onto a solid, having a surface of a given shape and material comprising:

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(a) controlling the magnitude and duration of the temperature of said surface,

15 (b) introducing fuel and/or fuel containing additives in controlled amounts onto said surface, and

(c) weighing said solid before and after said introducing step to determine the amount of deposit onto said surface.